



3Penn State Abington Makerspace
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Emergencies

Immediately notify local emergency services by dialing 911 for serious incidents (e.g., injuries requiring professional medical attention, fires, explosions, etc.).

Environmental Health and Safety (EHS) is always available for notification of incidents and/or consultation regarding laboratory safety issues. They can be contacted by dialing 814-865-6391. Their website is located at www.ehs.psu.edu.

I. Scope, Purpose, and Keywords

Scope: Operation of Brother CP100X Sewing and Quilting Machine by members and staff

Purpose: Safe operation of the tool

Keywords: Sewing, quilting, textile

II. Hazard Assessment

All hazards associated with this procedure should be identified in this section of the SOP.

Hazard	Required Engineering Controls and/or PPE
Needle puncturing skin	Avoid placing hand near active needle
Tangled thread can create jams and other hazards	Keep spools organized and free of tangles
Pinching or other damage to skin	Do not touch moving parts of machine



III. Procedures

All required safety procedures designed to protect those performing this procedure should be included in this section.

A. Equipment Required:

1. Brother Cp100x Sewing and Quilting Machine
2. Spools of thread
3. Material

B. Safety Precautions:

1. Exercise caution when handling needles. Always replace needles with the power off.
2. Keep fingers away from the needle area during operation.
3. Dispose of worn-out needles properly in designated sharps containers.
4. Keep thread spools organized and free from tangles to prevent thread jams.
5. Do not touch moving parts of the machine, especially while in operation.
6. Check that the sewing area is clear of any obstructions.

C. Machine Setup:

1. Place the sewing machine on a stable and flat surface.
2. Connect the power cord to a power outlet.
3. Turn on the machine using the power switch.

D. Threading the Machine:

1. Raise the presser foot using the presser foot lever.
2. Place the spool of thread on the spool pin.
3. Follow the threading guide on the machine for proper thread placement.
4. Thread the needle from front to back.
5. Pull the thread through the needle and leave a tail.

E. Bobbin Winding:

1. Place an empty bobbin on the bobbin winder.
2. Thread the bobbin following the designated path.
3. Push the bobbin winder to the right.
4. Start the machine and allow the bobbin to fill. Once full, cut the thread and return the bobbin winder to its original position.



F. Inserting the Bobbin:

1. Open the bobbin case and insert the wound bobbin.
2. Follow the bobbin threading guide to ensure proper placement.
3. Close the bobbin case cover securely.

G. Selecting Stitches:

1. Use the stitch selection dial to choose the desired stitch.
2. Adjust the stitch length and width as needed using the corresponding controls.

H. Fabric Placement:

1. Place the fabric under the presser foot.
2. Lower the presser foot using the presser foot lever.
3. Adjust the fabric to align with the chosen stitch pattern.

I. Sewing:

1. Hold the fabric with both hands, guiding it gently as you sew.
2. Use the foot controller to control the sewing speed.
3. To stop, release the foot controller and raise the needle by turning the handwheel toward you.

J. Troubleshooting:

1. In case of thread breakage, rethread the machine and ensure proper tension.
2. If the needle breaks, check for bent needles or fabric jams.

K. Maintenance:

1. Keep the machine clean by removing lint and dust regularly.
2. Oil the machine as per the manufacturer's guidelines.
3. Store the machine in a protective cover when not in use.
4. Always turn off the machine when threading or changing needles.
5. Keep hands away from the needle while the machine is in operation.
6. Disconnect the power cord when performing maintenance.

Note: Refer to the Brother CP100X Sewing and Quilting Machine user manual for specific details and troubleshooting tips. Regular maintenance and proper usage will ensure optimal performance and longevity of the machine.



IV. References

Include referenced protocols, Safety Data Sheets (SDS) and any other references in this section.

User Manual:

https://support.brother.com/g/b/manualtop.aspx?c=us&lang=en&prod=hf_cp100xeus

V. Revision History

Document prepared date and author identification

This document was created and prepared on 12/30/2023
by williamCromar, Program Coordinator



PennState

**BROTHER CP100X
SEWING AND QUILTING MACHINE
Standard Operating Procedure (SOP)**

Certification Page

My signature below attests that I have read and understand this SOP and agree to fully adhere to its requirements.

Date	Name	Penn State User ID	Signature